

REMARKS

Claims 7-11 and 14 are pending in the application. These claims were rejected as follows:

Claims / Section	35 U.S.C. Sec.	References / Notes
7-11, 14	§102(e)	<ul style="list-style-type: none">Bhandari (U.S. Patent No. 5,663,900).

- 5 Applicant has provided new claim 15 for consideration by the Examiner, and has addressed the issues raised by the Examiner in the discussion below.

CLARIFICATION ISSUES RAISED BY THE EXAMINER

1. Applicant has provided the following clarifying comments to the specific questions raised by the Examiner.

- 10 In the OA, the Examiner addressed the Applicant Remarks in a series of paragraphs in an attempt to clarify various aspects of the invention. Applicant responds as follows.

In numbered paragraph 18, the Examiner asked for clarification as to if the peripheral modules are (intended or planned) hardware modules on a
15 microprocessor chip, and are presently simulated as software modules.
Applicant responds that this understanding is primarily correct. The simulation of the modules occurs with software modules containing specialized code (e.g., the "markers", as indicated by the Examiner. However, it is possible to run the simulated software modules on the microcontroller hardware that such software
20 will ultimately run on when, e.g., the markers are removed (see Specification at 4/21-24).

In numbered paragraph 20, the Examiner asks for clarification as to what happens to the system timing when executing in accelerated operational mode. The following exemplary explanation should provide clarification. In non-accelerated operational mode, a serial interface, over several (simulated) clock cycles, converts data bit-by-bit into an output signal. Thus, simulation time is passing as this occurs. However, say at some point, one wants to investigate the contents of a buffer into which the serial data is moving—however, if the accelerated mode is not entered into, then the mere investigation into the contents of the buffer affects the simulation timing. Therefore, one enters the accelerated operation mode to query the contents of the buffer, display it, or perform other operations on it. While in the accelerated operation mode, the simulation time does not pass—therefore, the investigation of the buffer contents does not interfere with the timing in the simulation. Of course, the hardware clock physically connected to the CPU continues to operate or the CPU would not run, but the real “hardware” clock of the CPU is, in fact, decoupled from the simulation clock, as described by the Specification.

In numbered paragraph 24, the term “native mode” is a term known in the art and generally means running in a native form without interpretation or conversion—the term is suggestive of a normal operating mode of a computer, as opposed to an emulation mode.

35 U.S.C. §102(e) ANTICIPATION OF CLAIMS 7-11, 14 BY BHANDARI

2. Bhandari does not disclose the inserted "markers" into the first sequence of steps because it uses "interrupt" as a verb and not a noun.

5 The Examiner first addresses (in the OA, beginning on p. 7) how the section of Bhandari discussing how a "software program is used to control simulation operations, (e.g., start, single-step, monitor, or interrupt)," (2/7-9) reads on the present invention's claim 7, first element, "said first sequence of steps having markers inserted therein".

10 Applicant respectfully disagrees with the Examiner's characterization of "interrupt" as used by Bhandari. Part of this disagreement stems from the ambiguity of the term "interrupt" in the English language. This term "interrupt" can either be used as a noun (a person, place or thing), or a verb (an action word). The Examiner has clearly provided documentation of dictionary
15 definitions in which the word "interrupt" is a noun, i.e., a thing. And certainly, a software interrupt inserted into code would constitute a "noun/thing" interpretation of this word.

 However, this is not what Bhandari discloses. Bhandari, in the portion cited by the Examiner, treats "interrupt" as a verb (action word)... the software
20 program is used to perform an action, where "action" is one of: start, single-step, monitor, or interrupt. An "action" is not a tangible "thing" that can be inserted into the code. Would it make sense to insert a "start" into the code, insert a "single-step" into the code, or insert a "monitor" into the code? Clearly these are action words (verbs). Thus the Examiner's construction of the list would have to be:

“start” (verb), “single-step” (verb), “monitor” (verb), or “interrupt” (noun). This would be the equivalent of saying, “I think I’ll go to the park today and walk (verb), jog (verb), sprint (verb) or tennis shoe (noun)” —a nonsensical construction. This is just as nonsensical as treating the other list elements as
5 nouns (i.e., inserting a “monitor” by the software program to control simulation operations).

Since Bhandari does not disclose the insertion of “markers” by its use of the verb “interrupt”, this element of Bhandari cannot read on the marker element of the present invention.

10 3. *Bhandari does not disclose an accelerated operational mode according to the present invention.*

With respect to the Examiner’s arguments under claim element 7E, the Examiner states that the second sequence of steps being executed in an accelerated operational mode is read on by Bhandari’s control program
15 permitting single step operation that freezes the simulated time after executing the single step.

Claim 7 does not contain any language pertaining to a freezing of the simulated time—the Examiner is impermissibly reading limitations described in the embodiments of the Specification into the claim language. Claim 7 indicates
20 that the second sequence of steps is executed in an accelerated operational mode.

The Examiner states that Bhandari’s “single step” and “interrupt” freeze simulated time and that this translates into an accelerated operational mode that

reads on claim element 7E. The “freezing” referred to by the Examiner, certainly by the “single step” would not constitute “accelerated”, but rather would constitute decelerated to the maximum degree. Bhandari does not disclose the operation in an accelerated operational mode upon either the “single step” or “interrupt”.

5 4. Applicant has further added claim 15 for consideration by the Examiner
which indicates that the first sequence of steps and the second sequence of
steps are steps within the same module.

Applicant presents new claim 15 for consideration by the Examiner in which the first and second sequence of steps are present in the same module.

10 Applicant believes that Bhandari fails to teach such a construction for first and
second sequences of steps.

For these reasons, the Applicant asserts that the claim language clearly distinguishes over the prior art, and respectfully request that the Examiner withdraw the §102(e) rejection from the present application.

15 **CONCLUSION**

Inasmuch as each of the objections have been overcome by the amendments, and all of the Examiner's suggestions and requirements have been satisfied, it is respectfully requested that the present application be reconsidered, the rejections be withdrawn and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

Mark Bergner (Reg. No. 45,877)
Mark Bergner
SCHIFF HARDIN, LLP
PATENT DEPARTMENT

Appl. No. 09/530.549
Reply to Office Action of June 16, 2004

6600 Sears Tower
Chicago, Illinois 60606-6473
(312) 258-5779
Attorney for Applicants
Customer Number 26574

5

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the
United States Postal Service as First Class Mail in an envelope addressed to:
10 Mail Stop Non-Fee Amendment, Commissioner for Patents, PO Box 1450,
Alexandria, VA 22313-1450 on September 7, 2004.



Mark Bergner Attorney for Applicants

15